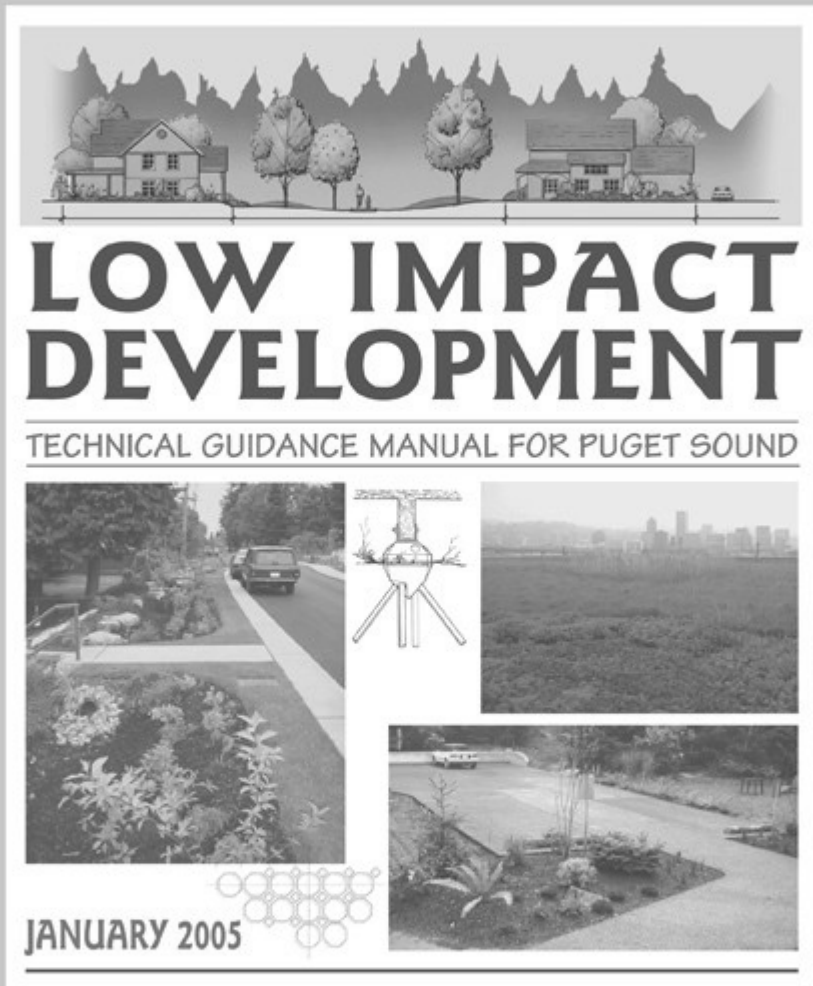




# *Low Impact Development Technical Guidance Manual for Puget Sound*

Curtis Hinman  
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- Context
- Purpose
- Content
- Development
- Response and Application



Puget Sound Action Team • Washington State University Pierce County Extension

## Conservation

- Preserves native trees, vegetation and soils
- Maintains natural drainage patterns

## Small-scale Controls

- Mimics natural hydrology and processes

# Key Elements of LID

```
graph TD; C[Conservation] --> SSC[Small-scale Controls]; SSC --> CSD[Customized Site Design]; CSD --> MPE[Maintenance, Pollution Prevention and Education]; MPE --> DRNA[Directing Runoff to Natural Areas]; DRNA --> C;
```

## Customized Site Design

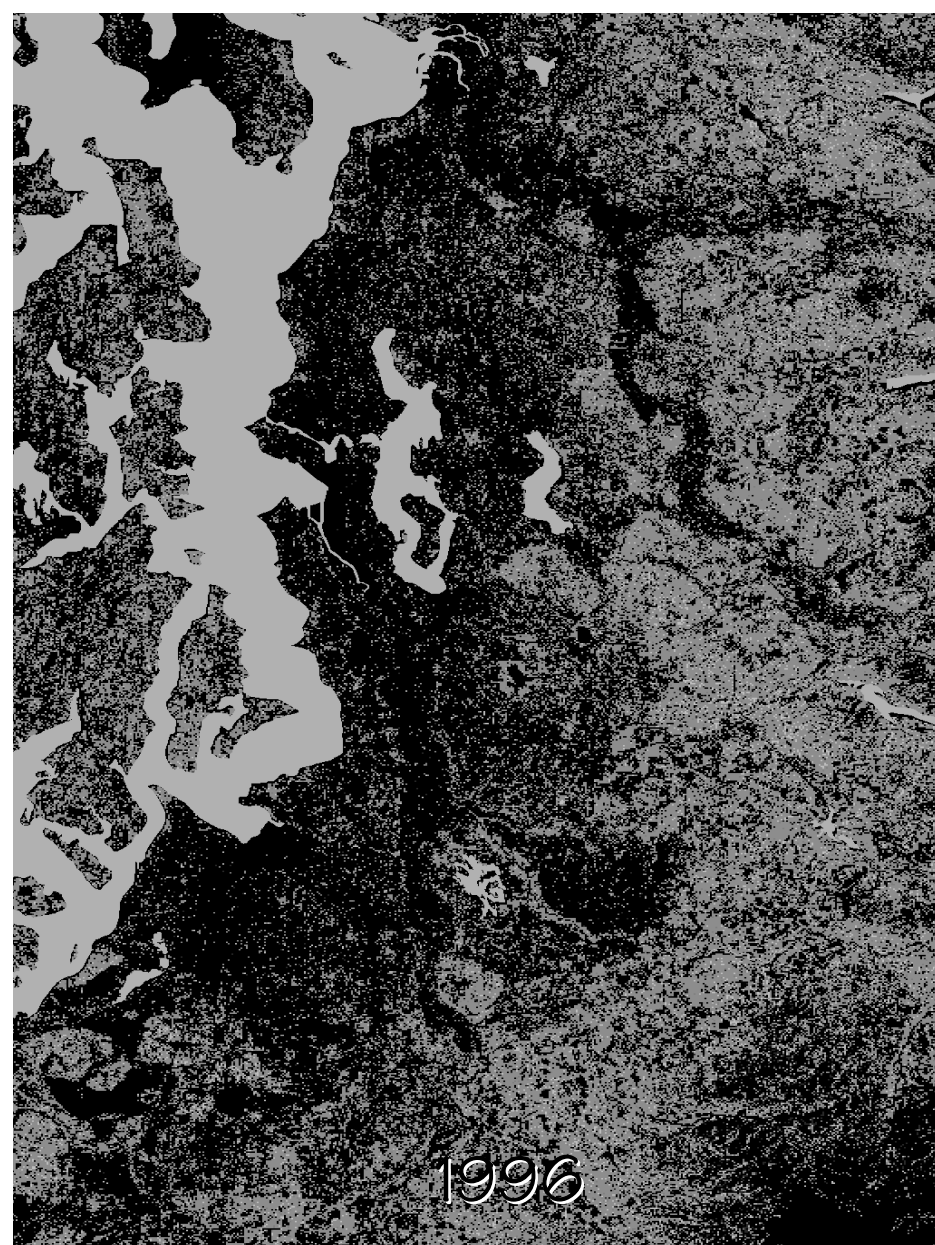
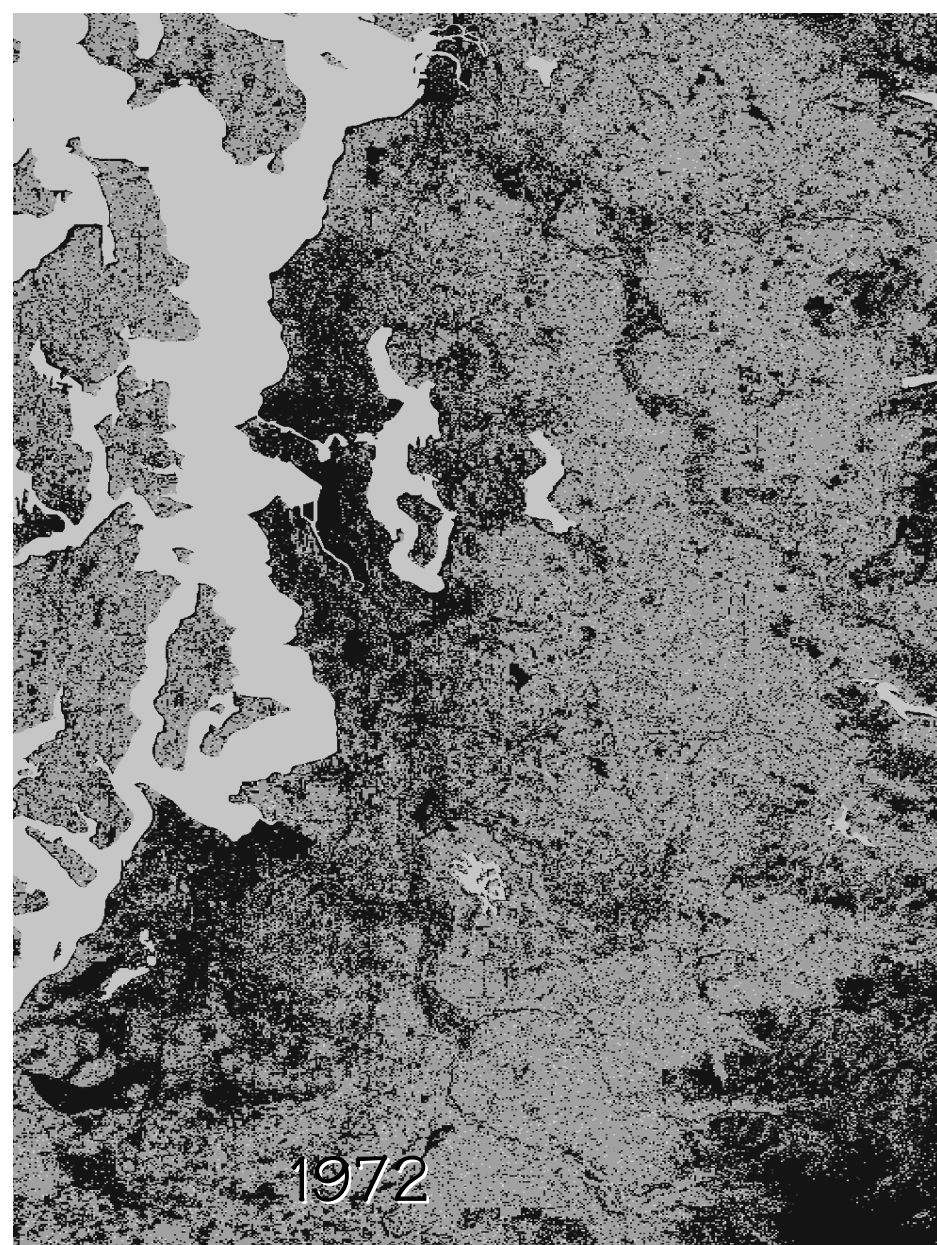
- Ensures each site helps protect the entire watershed

## Maintenance, Pollution Prevention and Education

- Reduces pollutant loads and increases efficiency and longevity
- Educates and involves the public

## Directing Runoff to Natural Areas

- Encourages infiltration and recharge of streams, wetlands and aquifers



Change in Forest Cover 1972-1996





# *Current Status of LID:*

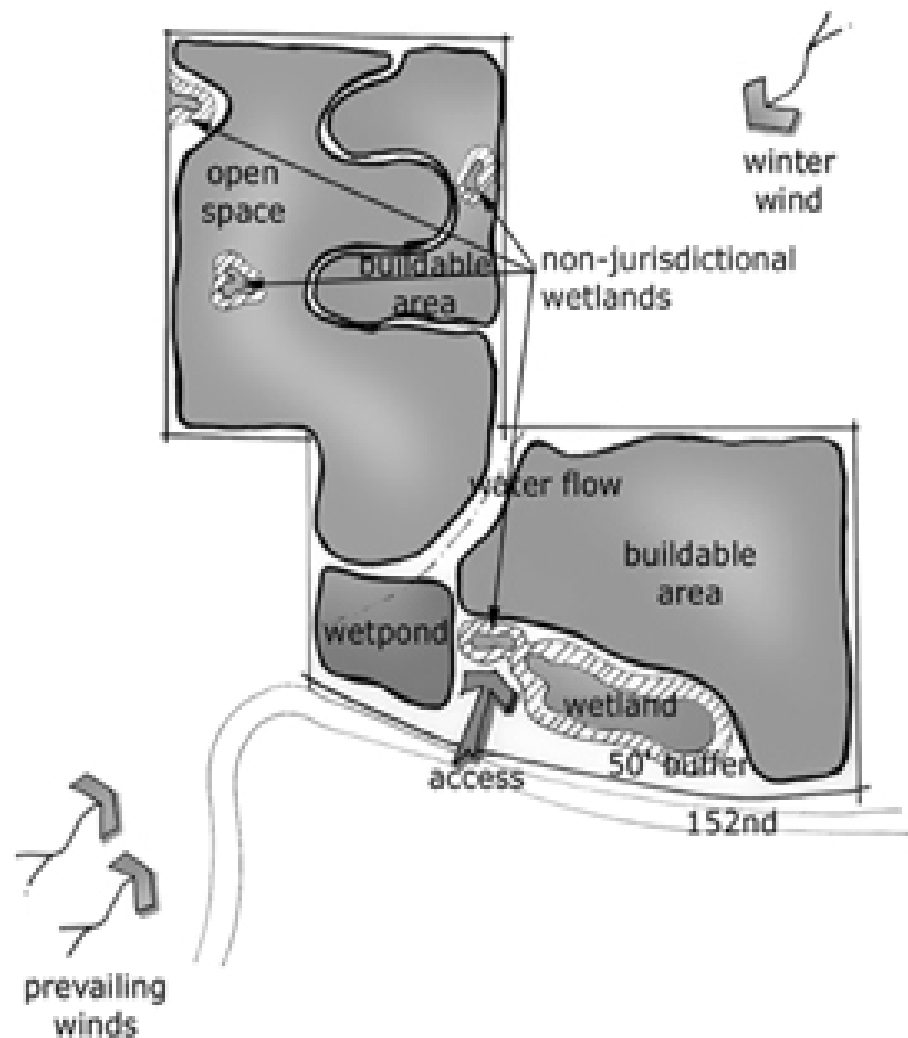
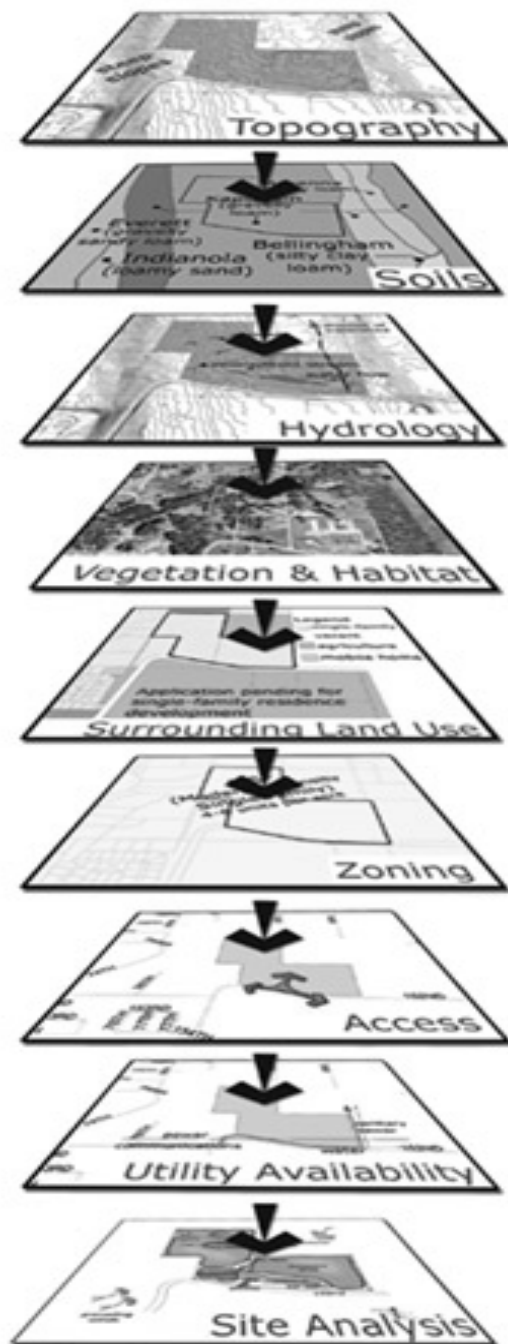
- LID priority in Puget Sound Water Quality Management Plan since 2001 (PSAT, Office of the Governor)
- Ongoing education
- NPDES Phase II requirements (section S-7)
- LID manual and code revisions  
...institutionalizing LID
- Demonstration projects, monitoring,  
and refining guidelines and specifications

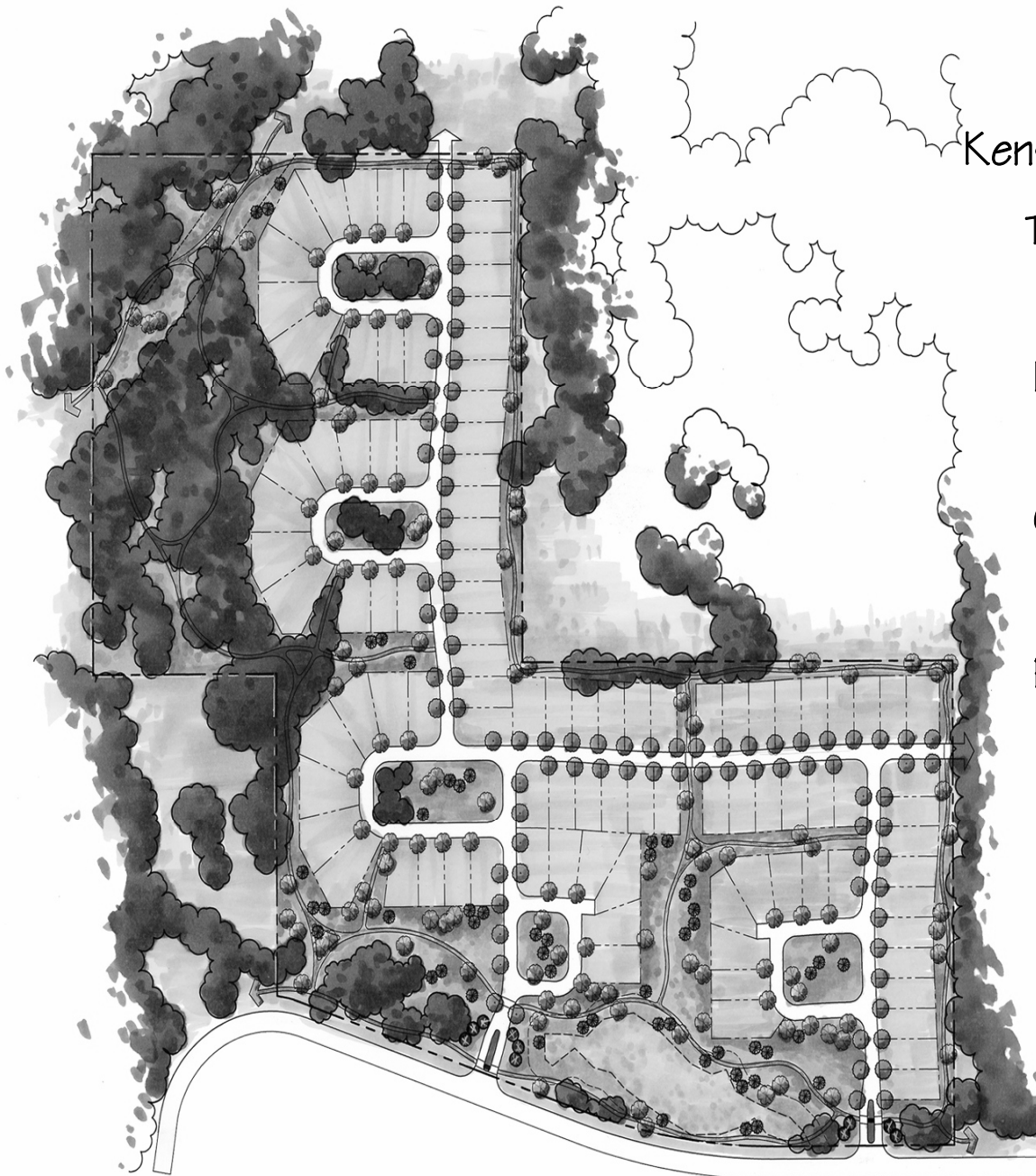




## *Purpose of LID Manual*

- Provide designers with a common understanding of LID goals, objectives, specifications for practices, and flow reduction credits
- Provide background research to assist designers make informed decisions
- Not a regulatory document





## Kensington Estates

Total acres:

23.92

Lots:

103 (4,143 sq ft ave.)

Open space:

15 acres (63 %)

Effective impervious area

low



COOPERATIVE EXTENSION  
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# *Flow Modeling Credit Categories*

- Permeable pavements
- Bioretention areas
- Vegetated roofs
- Roof rainwater harvesting
- Reverse slope sidewalks
- Low impact foundations
- Dispersion



# *Development*

- Partnership between Washington State University and Puget Sound Action Team
- Resource inputs...2-years, \$12,000, and significant in-kind contributions
- Living document
- Extensive input from regional and national experts





# *Advisory Committee*

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# *Response and Application*

- WA Dept of Ecology reference
- 3,000 copies distributed to local jurisdictions and consultants
- 3 jurisdictions have adopted manual and several considering adopting all or part
- In use extensively by jurisdictions and consultants as reference